

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/01951

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A63B39/06 A63B43/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A63B B41M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 823 891 A (WINSKOWICZ ROBERT T) 20 October 1998 (1998-10-20) column 3, line 26 - column 4, line 52; figures 3-5	1-4
A	US 4 065 126 A (MANTZ DAVID) 27 December 1977 (1977-12-27) column 2, line 65 - column 3, line 57; figures 1,3,4	1,3
A	US 4 637 616 A (WHITING CAROLYN C) 20 January 1987 (1987-01-20) abstract; figure 1	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

4 June 2003

Date of mailing of the international search report

10 NOV 2003

Name and mailing address of the ISA

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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-4

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/01951

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5823891	A	20-10-1998	AU 744830 B2 07-03-2002
			AU 9207298 A 27-04-1999
			CA 2305184 A1 15-04-1999
			CN 1279624 T 10-01-2001
			EP 1032458 A1 06-09-2000
			JP 2002504383 T 12-02-2002
			WO 9917844 A1 15-04-1999
			US 5938544 A 17-08-1999
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			US 6358160 B1 19-03-2002
			US 2002049100 A1 25-04-2002
US 4065126	A	27-12-1977	NONE
US 4637616	A	20-01-1987	NONE